Genus *Dierlia* Diakonoff, 1976 (Lepidoptera: Tortricidae) new to China

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Abstract: The genus *Dierlia* Diakonoff, 1976 is newly recorded from China. *Dierlia subrectangulata* sp. nov. is described as new based on a male specimen collected from Yunnan, and *Dierlia nebulocula* (Diakonoff, 1976) is proposed as a new combination based on a male specimen collected from Hong Kong, China. Diagnostic characters are given for the genus and two species. Photos of adults and male genitalia are provided.

Key words: Tortricoidea; Grapholitini; taxonomy

中国新纪录属—迪小卷蛾属 *Dierlia* Diakonoff（鳞翅目：卷蛾科）

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摘要：首次报道迪小卷蛾属 *Dierlia* Diakonoff, 1976 在中国的分布，记述采自云南的 1 新种：矩迪小卷蛾 *Dierlia subrectangulata* sp. nov.，并建立 1 新组合：雾迪小卷蛾 *Dierlia nebulocula* (Diakonoff, 1976) comb. nov.，提供了新种的成虫和雄性外生殖器特征图。

关键词：卷蛾总科；小食心虫族；分类

Introduction

The moths of the Grapholitini tribe range from very small to medium in size and are usually characterized by having a rather simple forewing pattern consisting of a dorsal blotch (or median fascia) and a well-defined ocelloid patch on a fuscous ground color. Danilevsky and Kuznetsov (1968) divided the tribe into two subtribes, Lipoptychina and Grapholitina. *Dierlia* belongs to Grapholitina. It was erected by Diakonoff in 1976, with D. *aurata* Diakonoff, 1976 as the type species.

Dierlia has two described species (*D. aurata* Diakonoff, 1976 and *D. poeciloptera* Diakonoff, 1976) distributed in the Oriental Region. In this paper, *Dierlia* is reported for the first time in China, and we describe two species based on the Chinese material. One is a new species and the other is a new combination. The studied specimens are deposited in the Insect Collection of Nankai University, Tianjin, China.

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Material and methods

The specimens examined in this study were collected by light traps. Adults were examined under an Olympus SZ-11 stereo microscope. Morphological terminology follows Baixeras (2002) and Komai (1999). Permanent slide mounting methods of genitalia and wings follow the techniques introduced by Li (2002). Images of adults were taken by using a Leica M205A stereo microscope, and the genitalia and wing venation were captured by using a Leica DM750 microscope.

All the studied specimens, including the types, are deposited in the Insect Collection of Nankai University (NKU), Tianjin, China.

Taxonomy

Genus *Dierlia* Diakonoff, 1976

Dierlia Diakonoff, 1976: 30. Type species: *Dierlia aurata* Diakonoff, 1976.

Diagnosis. *Dierlia* is characterized by the sixth tergum with a thick, transverse patch of dark scales in male and the abdomen without coremata (Figs. 3, 6); the forewing with termen notched below apex, without a costal fold in male, all veins present and distant from each other at base; the hindwing with veins sexually dimorphous, in male $Sc+R_1$ and Rs fused beyond outer edge of discal cell, in female $Sc+R_1$ and Rs free and Rs to apex; in the male genitalia, the tegumen with a pointed top, the valva with an obvious basal cavity, without a costal process, and the aedeagus with one to three cornuti; and in the female genitalia, the ductus bursae rather short, with a small funnel-shaped antrum, and with an irregularly sclerotized ring connected to an oval sclerite that has a concavity.

1. ***Dierlia nebulocula* (Diakonoff, 1976) comb. nov.** (Figs. 1–3)

Laspeyresia nebulocula Diakonoff, 1976: 39. TL: Nepal Kathmandu. TD: ZSM (Zoologische Sammlung des Bayerischen Staates, München, Germany).

Specimen examined. 1♂, **China,** Kadoorie Farm, Hong Kong, 210 m, 22.433°N, 114.117°E, 13-IV-2007, Houhun LI, genitalia slide No. LSH15922.

Diagnosis. This species is similar to *D. aurata* Diakonoff in the absence of the costal process, the semi-oval cucullus, and the obvious neck in the male genitalia. It can be distinguished by the sacculus about 1/3 length of the valva, the neck about 2/3 breadth of the sacculus and the aedeagus with three cornuti (deciduous); in *D. aurata*, the sacculus is about 1/2 length of the valva, the neck is about 1/2 breadth of the sacculus, and aedeagus has a single long cornutus (Diakonoff, 1976 described as: cornutus, a single long spine).

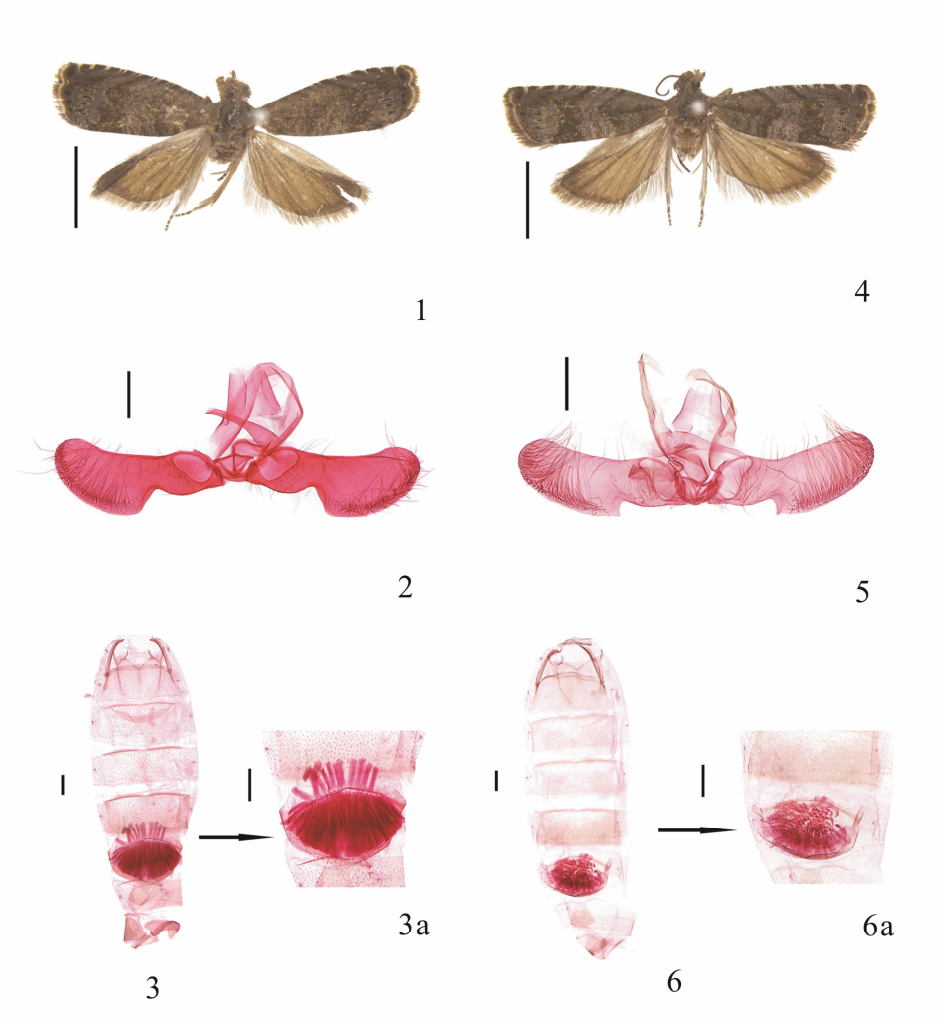
Distribution. China (Hong Kong); Nepal.

2. ***Dierlia subrectangulata* sp. nov.** (Figs. 4–6)

Holotype. ♂, **China,** Kunming, 24.924°N, 103.141°E, Yunnan Province, 1900 m, 30-VIII-2005, coll. Yingdang REN, genitalia slide No. LSH15760.

Diagnosis. The male is similar to *D. aurata* Diakonoff in having a sub-trapezoidal gnathos sclerotized laterally and an obvious neck. It can be distinguished by the sub-rectangular cucullus basally connected with the neck by approximately a right angle, and the aedeagus with two cornuti; in *D. aurata*, cucullus semi-oval (Komai 1999), basally

connected with the neck rounded and the aedeagus has a single long cornutus.



Figures 1–6. Adults and genitalia of *Dierlia* spp. 1–3. *Dierlia nebulocula* (Diakonoff); 4–6. *D. subrectangulata* sp. nov. 1, 4. Adult, ♂; 2, 5. Male genitalia. 2. Slide no. LSH15922; 5. Holotype, slide no. LSH15760; 3, 6. Abdomens. 3. Slide no. LSH15922, 3a. 6th abdomen; 6. Slide no. LSH15760, 6a. 6th abdomen, holotype; 4. Holotype. Scale bars = 2.0 mm (Figs. 1, 4); 0.2 mm (Figs. 2, 3, 5, 6).

Description. Adult (Fig. 4) with wingspan 9.60 mm. Head yellow greyish brown. Labial palpi light yellow brown; second segment curved, slightly crescentic with loose scales along ventral margin; terminal segment small, tapered, upcurved. Thorax and tegula grey brown. Forewing broad, since the base gradually widened, costa weakly curved towards apex, apex rounded, termen oblique, usually with notch below apex, scales grey-brown; costal strigulae yellow-white, 8 pairs, the first pair not well-defined, second to fourth pair and sixth pair respectively with an oblique outside violet-grey streak under them, with the basal three streaks to anterior margin of discal cell respectively, and the distal one to notch of termen, between first and second pair and between third and fourth pair with a dark brown streak from costa oblique to 1/2 anterior margin of discal cell and near upper angle respectively; the dorsal

blotch grey-white, mixed with violet-grey, with dark brown stripes inside and a dark brown rectangle spot outside, respectively connected with dark brown stripes between the first and second pair and between third and fourth pair; the ocelloid patch yellow, crescent, the anterior margin to below sixth pair of costal strigulae, the inner spot having 5–7 dark brown short horizontal strigulae, the inner line and outer line of speculum purplish grey, and meeting in tornus; basal line black grey; fringe with grey-white base, dark brown terminal. Hindwing base tan, terminal gradually deepening to dark brown, costal base yellowish-white where it overlaps with forewing; fringe yellowish-brown. Legs yellow, tarsus segments with dark grey base and yellowish-white end.

Male genitalia (Fig. 5). Tegumen broad, rounded at top. Gnathos sub-trapezoidal, sclerotized laterally. Basal cavity large and well-defined, nearly reniform, with fine setae on posterior and outer margins; neck obvious; cucullus sub-rectangular, basally connected with neck by a right angle, rounded terminally, densely covered with bristles along ventral margin on inner surface. Aedeagus shorter than valva, basal 2/5 expanded, abruptly narrowed, distally thinned toward apex, bent ventrad; with two cornuti.

Female unknown.

Distribution. China (Yunnan).

Etymology. The specific epithet is derived from the Latin prefix *sub*-, and Latin *rectangulata* (= rectangular), referring to the sub-rectangular cucullus in the male genitalia.

References

Baixeras J. 2002. An overview of genus-level taxonomic problem surrounding *Argyroploce* Hübner (Lepidoptera: Tortricidae), with description of a new species. *Annals of the Entomological Society of America*, 95(4): 422–431.

Danilevsky AS & Kuznetsov VI. 1968. Tortricidae, Tribe Laspeyresiini. *Fauna SSSR. Zoologicheskii Institut Akademii Nauk SSSR*, 98: 1−633.

Diakonoff A. 1976. Tortricidae from Nepal 2. *Zoologische Verhandelingen* (*Leiden*), 144: 1–145.

Komai F. 1999. A taxonomic review of the genus *Grapholita* and allied genera (Lepidoptera: Tortricidae) in the Palaearctic region. *Entomologica Scandinavica*, 55(supplement): 1–226.

Li HH. 2002. *Gelechiidae of China*, (*1*) (*Lepidoptera, Gelechiidae*). Nankai University Press, Tianjin, 538 pp.